

# **2010 Sierra Nevada AmeriCorps Partnership Service Plan**

## **California Tahoe Conservancy/ Tahoe Baikal Institute**

Title of position: **Natural Resources Technician**

Host Site: **California Tahoe Conservancy & Tahoe-Baikal Institute**

Site Supervisor: **Adam Lewandowski, California Tahoe Conservancy, Wildlife Program Coordinator**

Position Location: 1061 Third St., South Lake Tahoe, CA 96150

Service Dates: January 18, 2010 – December 31, 2010

Service Hours: 1700 hours minimum

### **Program Background**

The California Tahoe Conservancy (Conservancy) is an independent State agency within the Resources Agency of the State of California. It was established in its present form by State law in 1984. Its jurisdiction extends only to the California side of the Lake Tahoe Basin. The Conservancy is not a regulatory agency. It was established to develop and implement programs through acquisitions and site improvements to improve water quality in Lake Tahoe, preserve the scenic beauty and recreational opportunities of the region, provide public access, preserve wildlife habitat areas, and manage and restore lands to protect the natural environment.

The Conservancy owns approximately 6,000 acres within the Lake Tahoe Basin. In addition to managing and restoring these lands, the Conservancy works with other public land owners to implement a variety of projects throughout the California side of the Tahoe Basin. The Wildlife Habitat Enhancement and Stream Environment Zone/Watershed Programs implement watershed restoration projects to restore natural hydrologic functions, enhance habitat for wildlife and fisheries, and improve water quality. Currently there are several large-scale restoration projects in various stages of planning, implementation, and pre or post project monitoring.

The Tahoe-Baikal Institute's (TBI) mission is to connect passionate people with formative programming at two of the world's premiere freshwater ecosystems, Lake Tahoe in the Sierra Nevada and Lake Baikal in eastern Siberia, in order to foster a future where communities worldwide thrive in concert with their environment. The Tahoe-Baikal Institute's Summer Environmental Exchange (SEE) is an experiential, place-based educational program focusing on watershed conservation, sustainable development, and cultural exchange at Lake Baikal in Russia and at Lake Tahoe in the USA. During approximately 10 weeks from mid-June to late-August, participants enjoy a unique opportunity to learn about the natural and cultural history of the Tahoe and Baikal watersheds, as well as current initiatives in environmental science and policy. 17-to 20 participants spend five weeks at Lake Baikal (Siberia, Russia) and five weeks at Lake Tahoe (California and Nevada) discovering other cultures in a way that cannot be replicated in a classroom, learning from each other in formal and informal settings by leading discussions, sharing presentations, and living together for a summer.

The AmeriCorps members will work both independently and cooperatively with Conservancy and TBI staff to accomplish a range of tasks associated with watershed restoration, integrate current restoration efforts into the TBI program, and provide outstanding educational opportunities to a variety of audiences.

**Program Goals for 2010:**

- 1.) Perform baseline monitoring for 5 large-scale watershed restoration projects.
- 2.) Continue development and implementation of large-scale watershed restoration projects in the Tahoe Basin
- 3.) Reduce sediment sources, improve native vegetation, and enhance wildlife habitat on up to 50 acres of Conservancy land.
- 4.) Monitor and adaptively manage 2 previously completed stream restoration projects.
- 5.) Provide environmental education and interpretation opportunities for TBI participants, non-motorized boaters using Lake Tahoe, and other members of the public.
- 6.) Increase the programmatic capacity of TBI and enhance integration of Conservancy and TBI programs.

**Natural Resource Technician Tasks (total 1700 hrs):**

**Orientation, Training, and Coordination (290 hrs)**

<b>Date</b>	<b>Time Est.</b>	<b>Projects and Tasks</b>
ongoing	140 hrs	Attend Sierra Nevada AmeriCorps trainings, events, conference calls, and meetings.
Jan - Feb	20 hrs	Orientation: Become familiar with the California Tahoe Conservancy -- mission, goals and program objectives. Become familiar with Tahoe Baikal Institute. Review program guidelines, and review project plans & reports
Jan – Dec weekly	90	Attend weekly coordination meetings with site supervisor and other technical staff as needed. Attend bi-weekly Natural Resources staff meetings and Watershed/Wildlife program meetings to ensure member is aware of and fully integrated into

		program activities.
ongoing	40 hrs	Attend other trainings as appropriate. Potential trainings could include Geomorphology and Watershed Restoration field course through SFSU, Lake Tahoe Community College courses, Truckee River Symposium, in house trainings, relevant technical or scientific conferences, or other trainings as funding and schedule allow.

### **Watershed Restoration and Assessment ( 1165 hrs)**

<b>Date</b>	<b>Time Est.</b>	<b>Projects and Tasks</b>
Jan – Dec Approx. monthly	120 hrs.	<b>Groundwater Monitoring</b> Collect, download, and organize ground water data from existing monitoring wells to determine pre-project baseline conditions for several restoration projects on the Upper Truckee River.
Jan - April & Nov - Dec	50 hrs.	<b>Restoration Project Development</b> Assist with the design and planning for restoration projects by reviewing and providing comments on engineering plans, conceptual designs, technical reports, environmental review documents, and other documents related to proposed projects. Perform literature reviews on specific resources or design features.
Jan - June	40 hrs.	<b>Cold and Trout Creeks Adaptive Management</b> Conduct regular photo monitoring of Cold Creek & Trout Creek adaptive management project. Report on flooding conditions, and identify any new beaver dams and/or bank erosion. Monitor the effectiveness of a pond leveler installed to mitigate beaver caused flooding.
April – May & Sep -Oct	120 hrs.	<b>Native Riparian Vegetation Propagation</b> Collect spring and fall cuttings from native riparian vegetation (aspen, cottonwoods, alders, & dogwoods) and propagate in containers. Maintain greenhouse and irrigation system. Record data on survivorship.
June	25 hrs.	<b>CTC/ TBI Restoration Project</b> Assist with TBI work days. Assist with organizing, lead groups or projects, and participate in restoration work on CTC land with TBI participants. Document with photographs the conditions of the site before and after restoration

June	20 hrs.	<b>Fredericks' Site Restoration Project</b> Work with TBI Executive Director and US Forest Service Special Use-Permit Administrator to identify needed restoration work to be done on the Frederick's Cabin site. Coordinate with the Forest Service to obtain any needed permits for this work. Coordinate with the California Tahoe Conservancy staff to obtain necessary equipment for this work. Co-lead TBI participants in a restoration workday on the site.
June - August	100 hrs.	<b>Vegetation Monitoring</b> Perform riparian vegetation monitoring to assess restoration effectiveness including vegetative cover, meadow biomass, point intercept transects, and/or riparian community mapping. Duties will include managing all data and may involve refining protocols.
June - July	130hrs.	<b>TBI Research Project on Upper Truckee River</b> Prepare for and lead TBI research project. Project will focus on vegetation, wildlife, or water quality monitoring in support of an Upper Truckee River restoration project. Duties will include all pre-project prep, refining or adapting protocols in consultation with Conservancy staff, leading field work, managing data, and working with TBI participants to develop a presentation.
Aug - Nov	160 hrs.	<b>Watershed Assessment and Geomorphic Monitoring</b> Conduct geomorphic sampling under the general direction of Conservancy staff including: Surveying predefined cross-sections and longitudinal profiles on Trout Creek and Cold Creek in support of post-project adaptive management, monitoring erosion pins on Blackwood Creek, performing qualitative assessments of streams on Conservancy land, and surveying cross-sections and longitudinal profiles on Blackwood Creek and Upper Truckee River in support of pre-project monitoring. Work will include monumenting and GPSing new cross-sections, and organizing all data.
Aug - Nov	110 hrs.	<b>Stream Restoration</b> Conduct riparian restoration and streambank stabilization using willow staking, brush boxes, and other bioengineering techniques. Projects will include adaptive management of Cold and Trout Creeks, spot treatments on Blackwood and Ward Creeks, and restoration of other degraded streams on Conservancy land.
Aug - Dec	200 hrs.	<b>Trail Mapping and Restoration</b> GPS data collection and mapping of user created trails and other features in support of restoration project development. Download data, create maps, and prioritize trail segments for restoration or maintenance. Develop restoration plan for trail rehabilitation under general direction from technical experts, and work with Conservancy staff to schedule restoration. Perform trail restoration or maintenance to reduce erosion.

ongoing	40 hrs.	<b>Data Management</b> Manage data including: organizing and analyzing, quality control, creating and maintaining excel spreadsheets, creating graphs, tables, and charts, managing GIS data including creation of metadata, collecting and organizing reference materials, maintaining electronic and paper files.
As needed	50 hrs.	<b>Watershed Monitoring</b> Other pre and post project monitoring duties depending on member skills and interest. Tasks could include performing or assisting with avian point counts, protocol surveys for special status wildlife species, additional vegetation sampling, preparing meadow wetness transects, performing surveys for invasive species, writing reports, performing literature reviews, managing data or creating GIS maps.

### **Watershed Education (175 hrs)**

<b>Date</b>	<b>Time Est.</b>	<b>Projects and Tasks</b>
Jan - April	30 hrs.	<b>Community Paddle</b> Assist Lake Tahoe Water Trail Committee with organizing spring community paddle. Duties to include event organization, volunteer coordination, and securing interpretive speakers & educational materials.
Jan - Mar & Oct - Dec	30 hrs.	<b>Interpretive Kayak Maps</b> Assist Lake Tahoe Water Trail Committee with preparation of Lake Tahoe day trip maps. Duties to include research and preparation of educational information, graphics development, and project & volunteer coordination.
Jan - April	80 hrs	<b>Annual Summer Environmental Exchange</b> Assist with planning the schedule for the 5 weeks that TBI's Summer Environmental Exchange group spends in California. Arrange appointments for the group to meet with local policy makers, scientific researchers, environmental advocates and community business leaders. Assist with logistics of participant travel, including researching plane fares, and mapping directions/ routes for ground transportation. Assist Program Director with coordinating program details and logistics. Contribute to development of SEE program curriculum, syllabus and itinerary.
May - Oct	20 hrs.	<b>Fredericks' Cabin</b> Many of the Tahoe-Baikal Institute's programs at Tahoe are hosted at the U.S. Forest Service Fredericks' site located on the shore of Fallen Leaf Lake. The Tahoe-Baikal Institute has a 20-year special use permit to operate the site from May through

		October. The AmeriCorps member will assist with: coordinating spring opening of cabin; coordinating aspects of running the site such as exterminator, garbage removal, phone line installation, water-system; and updating Site Operations and Maintenance Plan. She/He will also educate visitors (including but not limited to TBI participants) about the history of the site, TBI's partnership with the USFS, and the ecology of the site.
Oct - Dec	15 hrs.	<b>Build TBI Alumni Network</b> Update alumni contact information in Gift Works database. Plan and advertise alumni events. Assist with alumni Newsletter in October/November, collecting annual updates from alumni in both the United States and Russia. Support alumni volunteer events (i.e. pizza nights, mass mailing prep nights), enter results from events (data entry in databases), and create follow-up mailings as appropriate.

### **Volunteer Recruitment & Support (65 hrs)**

<b>Date</b>	<b>Time Est.</b>	<b>Projects and Tasks</b>
Jan - April	30 hrs.	<b>Community Paddle</b> Assist Lake Tahoe Water Trail Committee with organizing spring community paddle. Duties to include event organization, volunteer coordination, and securing interpretive speakers & educational materials.
Jan - Mar & Oct - Dec	20 hrs.	<b>Interpretive Kayak Maps</b> Assist Lake Tahoe Water Trail Committee with preparation of Lake Tahoe day trip maps. Duties to include research and preparation of educational information, graphics development, and project & volunteer coordination.
Oct - Dec	15 hrs.	<b>Build TBI Alumni Network</b> Update alumni contact information in Gift Works database. Plan and advertise alumni events. Assist with alumni Newsletter in October/November, collecting annual updates from alumni in both the United States and Russia. Support alumni volunteer events (i.e. pizza nights, mass mailing prep nights), enter results from events (data entry in databases), and create follow-up mailings as appropriate.

### **Resource Attainment (5 Hrs)**

<b>Date</b>	<b>Time Est.</b>	<b>Projects and Tasks</b>
ongoing	5 hrs.	<b>Materials Attainment</b> Seek donated materials from private individuals or organization for use in member projects such as native plant propagation, watershed monitoring, and educational events.

Category	Total Hours	Percent of total hours
Watershed Assessment & Restoration	1165	68.6%
Watershed Education	175	10.3%
Volunteer Rcrt. & Supp.	65	3.8%
Member Training	290	17.0%
Resource Attainment	5	0.3%
Total Hours	1700	100%

### **Applicant Requirements:**

- Must be a U.S. Citizen, U.S. National, or Lawful Permanent Resident Alien of the U.S.
- Must have a minimum of a High School Diploma or GED (higher education degrees are highly recommended).
- Must be a minimum of 18 years or older.
- Must not have a criminal history that precludes the applicant's ability to work with vulnerable populations, such as the youth and elderly.

### **Necessary Skills and Qualifications:**

- Ability to work with local community members, conservation groups and agencies
- Experience organizing events
- Skills facilitating and/or participating in group meetings
- Ability to lay out work tasks, identify resources, focus work and complete tasks on time
- Strong writing skills
- Public speaking and outreach skills
- Independent, highly motivated, and able to meet deadlines with limited supervision
- Passion for the natural environment
- Proficiency using personal computers and Internet
- Ability to travel throughout the region
- Physical ability to perform strenuous activities at high elevations

### **Required Position Qualifications:**

- Education in environmental sciences, biology, ecology, hydrology or a related field
- Ability to work independently, take initiative, and solve problems
- Familiarity with GPS and/or GIS
- Attention to detail and ability to organize data

### **Desirable Qualifications:**

- Experience with monitoring, planning, or implementation of stream restoration projects
- Specialized experience in wildlife, vegetation, geomorphology, or hydrology
- Familiarity with CEQA and/or NEPA
- Knowledge of Sierra Nevada ecosystems and environmental issues in the Lake Tahoe Basin